

**SECTION 01000**

**GENERAL REQUIREMENTS**

PART 1 - GENERAL

**1.01 PROJECT DESCRIPTION**

- A. The project consists of furnishing all labor, materials, and equipment in connection with the **REPAIR / ADD TO BREAKERS DINING HALL BUILDING #13330** at Vandenberg Air Force Base, California.
- B. The work is briefly described as follows, but is not the entire scope of the project:

The addition of two solarium dining areas.

The addition of storage, office, flight kitchen and lounge areas with CMU exterior walls, slab floor and steel framing for metal deck and insulated roof.

Demolition and removal of all surfaces in the existing dining hall and serving areas.

Installation of new dining configuration with booths, half walls and ceiling improvements.

Renovation of serving area and bakery area in kitchen including new equipment and complete connections.

**1.02 OCCUPANCY:**

- A. The project site(s) will be unoccupied by base personnel during construction operations.

**1.03 WORK SCHEDULE**

- A. Working hours will normally be between the hours of 7:30 a.m. and 4:30 p.m., excluding Saturdays, Sundays, and federal holidays. If the Contractor desires to work during periods other than above, he shall make his request to the Contracting Officer 3 workdays in advance. If Government inspection forces are not required or such forces are reasonably available, the Contracting Officer may authorize the Contractor to perform work during periods other than normal duty hours/days; however, if Government inspectors are required to perform in excess of their normal duty hours/days solely for the benefit of the Contractor, the actual cost of inspection at overtime rates will be charged to the Contractor. These adjustments to the Contract price may be made periodically as directed by the Contracting Officer.

**1.04 SECURITY**

- A. The Contractor shall obtain all passes, badges, decals, or other identification media required for security clearance to areas where work is performed. Obtain vehicle and individual identification media at the Pass and Registration Section, 30 SW/SPAP, Building 11777, 6-1853. Identification media shall be surrendered to the Pass and Registration

Section upon termination of the Contract, or termination of an individual's employment with the Contractor.

#### **1.05 UTILITIES**

- A. Utilities directly required to complete the Contract may be provided, if available, to the Contractor without charge. Any temporary connections or lines that are required shall be installed, maintained, and removed by the Contractor at his own expense and in a manner satisfactory to the Contracting Officer. Contractor shall remove temporary utilities before final acceptance.
- B. Schedule all utility outages and secure approval of these outages from the Contracting Officer at least 5 work days in advance of the outage.

#### **1.06 SAFETY**

- A. Contractor shall observe all safety and fire regulations as presently enforced at Vandenberg AFB. The construction shall be in accordance with the US Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, and Occupational Safety and Health Act (OSHA) Public Law 91-596. Comply with OSHA and Air Force Occupational Safety and Health (AFOSH) safety standards.
- B. All construction sites are subject to fire and safety inspections without notice. Any violation of fire and safety standards may result in a work stoppage at the expense of the Contractor.
- C. Contractor shall hold a safety briefing for all subcontractors and craftsmen prior to construction or demolition. This briefing shall be for the specific purpose of making all personnel aware of asbestos and/or lead-based paint issues that may be encountered during demolition and/or renovation even though the project may not seemingly involve disturbance of those substances.

#### **1.07 CONSTRUCTION PERMIT**

- A. The Contractor shall obtain and process an AF Form 103, Civil Engineering Work Clearance Request, from the Administration, 30 CES/CECA, Building 11433, 6-8093. The Contractor shall provide sketches showing location, size, and depth of any excavation and trenching. The Contractor shall list proposed utility, fire, or security system outages. The AF Form 103 shall be processed through the appropriate Government agencies for review and coordination. Government agencies will annotate the form with special instructions or requirements. The AF Form 103 with sketches, all in triplicate, shall be submitted a minimum of 5 workdays prior to construction start date. Work shall not begin until the AF Form 103 is fully approved.
- B. Environmental monitors may be required from the Environmental Management Office, 30 CES/CEV, Building 7015. 72 hours advance notice for environmental monitors is required. Work shall not begin until the monitors are present.
- C. When any digging is performed in the vicinity of utilities or communication cables, Civil Engineer Squadron (30 CES) and/or

Communications Squadron (30 CS) monitors will be present, as required. No mechanical digging shall be performed within 4 feet of utilities or communication cables until they are physically exposed by hand digging.

If a utility or communication cable is damaged, notify the Contracting Officer immediately. 24 hours advance notice for CES monitors, 6-8093, and CS monitors, 6-7534, is required. Work shall not begin until the monitors are present.

- 1.08 WELDING PERMIT:** Any welding or torching on Vandenberg AFB requires a welding permit. The Contractor shall obtain a welding permit from the Fire Protection Flight, 30 CES/CEF, Building 10660, 6-5380. A permit will be issued within 2 workdays with instructions for welding fire prevention.

**1.09 ENVIRONMENTAL COMPLIANCE AND MONITORING**

- A. All construction activity performed on Vandenberg AFB is subject to federal environmental laws including, but not limited to: The National Environmental Policy Act (NEPA); The National Historic Preservation Act (NHPA); Endangered Species Act; Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response Liability and Compensation Act (CERCLA); Clean Water Act (CWA); Clean Air Act (CAA); Safe Drinking Water Act (SDWA), and applicable state, regional, and local equivalents. The Contractor is responsible for compliance with these laws. The Environmental Management Office, 30 CES/CEV, is the single point of contact with regulatory agencies on Vandenberg AFB. Any underground storage tanks (USTs), piping, etc., encountered that are covered by CERCLA are to be reported to 30 CES/CEV. CERCLA-associated material will be taken care of by the Installation Restoration Program Remedial Project Manager. If a UST is discovered, report it to the Installation Restoration Program Section, 30 CES/CEVR, Building 7015, 5-0635.
- B. The Contractor shall mark the construction limits using 36-inch stakes placed no further than 25 feet apart. Construction limits include all areas affected by the project to include construction lay-down, parking, construction access, security and fire protection requirements and utility requirements. These stakes must remain in place for the duration of the project. After staking, the construction limits will be inspected and must be approved by 30 CES/CEV prior to the start of construction. Any encroachment outside the staked area may result in construction delays and increased environmental costs for which the Contractor shall be liable. 72 hours advance notice for Environmental monitors is required.
- C. Vandenberg AFB is subject to all Santa Barbara County Air Pollution Control District (APCD) rules and regulations. The Contractor shall comply with all APCD rules and regulations. These include, but are not limited to, the following:
1. All demolition, site clearing, rough grading, landscape grading, excavation, back-filling, and trenching shall comply with APCD Rules 210, 302, 303, 304, 306, and 1001.
  2. All coating/painting operations shall comply with APCD Rules 102F, 201, 317, 322, 323, 330, 337, and 339.

REPAIR / ADD TO DINING HALL  
BUILDING 13330  
VANDENBERG AIR FORCE BASE

XUMU #96-1215 B/C

3. All construction of new or modified air conditioning systems shall comply with APCD Rule 335.
4. All operations with solvents shall comply with APCD Rules 317 and 324.

5. All sandblasting/corrosion control operations shall comply with California Administrative Code, Title 17, Register 84, No. 35, Sections 92000 through 92540 and shall comply with APCD Rules 303, 304, 306, 205.C.3.b.1, 901, and 1001. All sandblasting equipment must be permitted with a valid Permit to Operate (PTO) from the APCD. Only abrasives that are certified for use in sandblasting operations by the California Air Resources Board (CARB) Advisory may be used.
- D. The Contractor shall be responsible for the removal, storage, transportation, and disposal of all hazardous waste (Title 22, CCR) and designated waste (Title 23, CCR), and hazardous materials in accordance with applicable federal, state, local and base regulations. Copies of all analyses and manifests shall be given to the Government inspector at the time of removal from the base and after disposal facility accepts and signs for the waste. 30 CES/CEV personnel must sign hazardous waste manifests only. It is the responsibility of the Contractor to immediately notify the Government of any suspected hazardous material not heretofore identified. Suspected hazardous materials encountered during excavation and construction will require immediate notification of Bioenvironmental Engineering Services (base Hospital) for examination, possible sampling, and guidance for management. If hazardous or designated waste is verified no work will proceed until the Contractor's plan is developed and approved.
- E. All electrical equipment removed, maintained or repaired, as part of this Contract shall be tested for polychlorinated biphenyls (PCBs), a regulated hazardous waste. The Contractor shall pay for testing and laboratory analyses. Testing, removal, storage, transportation and disposal of this material shall follow federal, state and Base guidelines. Specifically, once positive PCB identification has been made, the Contractor shall notify 30 CES/CEVC (5-0544) and request an inspection prior to moving the PCB contaminated equipment. 30 CES/CEVC shall review the Uniform Hazardous Waste Manifest (UHWI), which is to be correctly filled out by the Contractor. At the same time, the Contractor shall inform 30 CES/CEVC of the intended treatment, storage and disposal facility (TSDF) to be used. Once the Contractor has successfully accomplished all of the above, the contaminated equipment shall be brought to the Vandenberg AFB truck scales for weighing and subsequent removal of the items from the Base and immediately delivered by the Contractor to the TSDF. This may include, but not be limited to the following: 40 CFR 761 (Federal), Title 22 CCR (California), and OPLAN 8550-XX (VAFB).
- F. Radioactive materials brought onto Vandenberg Air Force Base are subject to inspection by the Nuclear Regulatory Commission (NRC), and Contractors must have all the required permits and forms completed prior to bringing any such material on base. Strict adherence to 10 CFR 19, 10 CFR 20, 20 CFR 21, 10 CFR 36, 10 CFR 39, and Air Force Instruction (AFI) 40-201 is mandatory. Contractors must contact the Base Radiation Officer, 30 AMDS/SGPB, extension 6-7811, for the appropriate documents and permits required.
- G. SUPPLEMENTAL ASBESTOS MANAGEMENT REQUIREMENTS
  1. Required Training, Vandenberg AFB:

- a. Any Contractor who provides professional health and safety services relating to asbestos-containing construction material (ACM) shall be certified as an Asbestos Consultant in accordance with Section 341.15, Article 2.6 of Title 8, California Code of Regulations. Professional health and safety services relating to ACM include building inspection, abatement project design, Contract administration, sample collection, preparation of asbestos management plans, clearance monitoring and supervision of Site Surveillance Technicians as defined in Section 1529, Article 4 of Title 8, California Code of Regulations.
  - b. Any Contractor who retains the services of an independent on-site representative of an Asbestos Consultant monitoring the asbestos abatement activities of others, providing asbestos air monitoring services for area and personal samples and performing building survey and Contract administration at the direction of an Asbestos Consultant shall be certified as a Site Surveillance Technician in accordance with Section 341.15, Article 2.6 of Title 8, California Code of Regulations.
2. Building Asbestos Surveys: Prior to beginning any project, the Contractor shall acknowledge, in writing, to the Contracting Officer (see Atch 1), their full understanding of the building asbestos survey observations, results, and findings (see Atch 2). This acknowledgement will also state the Contractor's commitment to not undertake any general construction work or any other activity that would break-up, dislodge, or similarly disturb ACM until a licensed asbestos Contractor, with appropriate advance notice to the Santa Barbara Air Pollution Control District as required by applicable regulations, has performed abatement work and cleared the area for re-entry. Further, the entity performing construction work shall be responsible for identifying suspect ACM encountered during construction, which was not identified in the survey. If suspect ACM is encountered during the construction work, the entity performing the construction work in the affected area shall immediately cease and arrangements for sampling of the material shall be made. Work shall not resume until the material has been found to be asbestos-free or until the appropriate asbestos abatement work has been planned, approved, notifications made, and asbestos abated.
3. Notification:
  - a. The Contractor shall be responsible for obtaining all required asbestos and demolition permits required by regulation from the SBCAPCD. The Contractor shall be responsible for paying all fees and costs required for obtaining permits.
  - b. Prior to submitting any asbestos abatement or demolition notification request to SBCAPCD, the Contractor shall coordinate all notification requests with the Base Environmental Asbestos Program Officer (APO). The Contractor shall submit notification request with sufficient lead-time, to allow coordination review by APO and meet the required 10-day advance notification to SBCAPCD.
  - c. In accordance with SBCAPCD rules and regulations, any Contractor or subcontractor performing demolition work shall obtain a demolition permit from the SBCAPCD 10 days in advance of commencement of demolition. The regulations define demolition as follows: **"The wrecking or taking out of any load-supporting member or the intentional burning of a facility."** A demolition

permit is required regardless of whether ACM is encountered, removed, or abated on the project.

4. Site Asbestos Safety Meeting: The Contractor shall conduct an asbestos safety conference for construction projects prior to the start of actual work. The conference shall include representatives of the owner or Contracting agency, the Contractor, the employer, employees, and employee representatives. Include in the discussion the employer's asbestos safety program and such means, methods, devices, processes, practices, conditions, or operations as the employer intends to use in providing a safe place of employment. The authorizing owner or operator shall maintain written documentation of topics discussed and persons attending.

#### **1.11 DISPOSAL OF REMOVED MATERIALS**

- A. The Government inspector will examine all materials removed from the project not indicated for reuse, and will tag or otherwise designate those materials that are serviceable or salvable.
- B. Serviceable or salvageable items, except for locks, latches, and cylinders, shall be turned in, by appointment, to the Defense Reutilization and Marketing Office, DRMO/SYT, Building 11559, 6-9431, or Base Supply by the Contractor. All locks, latches, and cylinders shall be turned into the Base Lockshop, 30 CES/CEOHV, Building 11439, 6-5236. The Contractor shall schedule DRMO appointments far enough advance to allow efficient processing of turn-ins. Scrap metal shall be segregated into ferrous and nonferrous metals, and shall be cut, dismantled, palletized, or prepared as required by the DRMO office for acceptance. Dismantling of equipment of material into separate components may be required. The Contractor shall protect materials from damage or theft during the interval between removal and disposal. Any serviceable or salvageable items not accepted by DRMO or Base Supply will become the property of the Contractor and will be properly handled, transported, and disposed of off-base by the Contractor in conformance with all federal, state, and local regulations or treated as unusable items, if permitted, within the limits of the following paragraph.
- C. Unusable items (with no salvage value) shall be transported to the base sanitary landfill by the Contractor as directed by the Contracting Officer or the designated Construction Representative (COR). The COR will inspect all loads of refuse and will issue a landfill access ticket. The purpose of the ticket will be to verify that the refuse was removed from a Vandenberg AFB project. The issuing of the ticket does not relieve the Contractor from the responsibility of properly hauling, handling, and disposing of all refuse. The Contractor shall be required to weigh in at the scale (Building 9505) prior to transporting material to the landfill or the designated rubble yard. Recyclable materials (wood, concrete, asphalt, cardboard, metal, and green waste) shall be segregated by material type and shall be disposed of as instructed by the landfill operator. All items determined to be unacceptable for disposal by the landfill operator or the COR shall become the property of the Contractor and disposed of off base at no additional cost to the Government. Vehicles used in the transportation of refuse shall be covered by a tarpaulin or similar covering while operating on Vandenberg AFB actively transporting refuse of any type. The landfill is subject to daily limits on disposal of refuse and the Contractor may have to

wait to dispose of the material. Before disposal in the landfill, the Contractor shall provide certification that there is no hazardous or designated waste, concrete, or asphalt.

- D. Concrete and asphalt may be transported to the base rubble yard for processing when authorized by the landfill operator where a ticket will be issued to the Contractor for transportation authorization. Each load of concrete or asphalt transported to the rubble yard must have a weight ticket. Loads without authorization to transport or weight tickets will be turned back.
- E. Unless otherwise authorized as detailed in the preceding paragraphs, the Contractor shall be required to segregate concrete and asphalt, and transport the materials off-base to recycling vendors.

#### **1.12 CONSTRUCTION WASTE MANAGEMENT**

##### **A. SUMMARY:**

- 1. The following specifies administrative and procedural requirements governing the Contractor's management and disposal of construction and demolition waste.
- 2. The contractor shall prepare and submit the following plans and obtain approval by the Contracting Officer of the following plans prior to the start of construction or demolition:
  - a. Emergency Response Plan and Spill Prevention Plan
  - b. Waste Management Plan for non-hazardous waste
  - c. Storm Water Pollution Plan

##### **B. WASTE MANAGEMENT GOALS:**

- 1. The Government has established that all projects shall minimize materials going into landfills and shall generate the least amount of waste possible. The Contractor shall employ processes that ensure the generation of as little waste as possible due to over-packaging, error, poor planning, breakage, mishandling, contamination, or other factors.
- 2. Of the inevitable waste that is generated, reuse, salvage, or recycle as many of the waste materials as economically feasible. Minimize waste disposal in landfills.

##### **C. HAZARDOUS WASTE MANAGEMENT AND DISPOSAL PLAN:**

- 1. Procedures for preparing a Hazardous Waste Management and Disposal Plan are described in the Vandenberg AFB Hazardous Waste Management Plan, available from the Contracting Officer. For asbestos remediation, refer to the Vandenberg AFB Asbestos Management Plan and Asbestos Operating Plan available from the Contracting Officer.

##### **D. EMERGENCY RESPONSE PLAN AND SPILL PREVENTION PLAN:**

- 1. Procedures for preparing an Emergency Response Plan and Spill Prevention Plan are described in the Vandenberg AFB Hazardous Waste Management Plan, available from the Contracting Officer.



REPAIR / ADD TO DINING HALL  
BUILDING 13330  
VANDENBERG AIR FORCE BASE

XUMU #96-1215 B/C

2. The Contractor shall review fire suppression systems and material safety data sheets for all materials stored on the project site. Follow the procedures set forth in the Vandenberg AFB Hazardous Materials Plan, which is available from the Contracting Officer.

E. WASTE MANAGEMENT PLAN:

1. Draft Waste Management Plan: Prior to any demolition, waste removal, or construction, the Contractor shall develop and submit to the Contracting Officer a Draft Waste Management Plan. The Draft Plan shall contain the following:
  - a. Analysis of the proposed job-site waste to be generated, including types and quantities.
  - b. Alternatives to Land-filling: Contractor shall designate responsibility for preparing a list of each material proposed to be salvaged, reused, or recycled during the course of the project, the proposed local market for each material (consult local integrated waste management programs), and the estimated net cost savings or additional costs resulting from separating and recycling (versus landfilling) each material.
  - c. Landfill Options: The name of the landfill(s) where trash will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all project waste in the landfill(s). for tipping fees at the Vandenberg AFB sanitary landfill, obtain the cost per ton from 30 CES/CEVC.
    - (1) Revenue from the sale of recycled or salvaged materials.
    - (2) Landfill tipping fees saved due to diversion of materials from the landfill.
  - d. List of materials to be recycled, reused, or returned to manufacturer shall include, at minimum, the following materials:
    - (1)Cardboard, paper, packaging
    - (2)Clean dimensional wood, palette wood
    - (3)Beverage containers
    - (4)Land clearing debris
    - (5)Concrete: Crush all concrete and reuse on-site as fill or as an ingredient in Class II base.
    - (6)Bricks
    - (7)Concrete masonry units (CMU)
    - (8)Asphalt: Reuse on-site as fill or as an ingredient in Class II base.
    - (9)Metals from banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
    - (10) Drywall
    - (11) Carpet and pad
    - (12) Paint
    - (13) Asphalt roofing shingles
    - (14) Rigid foam
    - (15) Glass
    - (16) Plastics
2. WASTE MANAGEMENT PLAN: Once the Contracting Officer has determined and notified the Contractor which of the recycling options addressed in the Draft Waste Management Plan are acceptable, the Contractor

shall submit, within 10 calendar days, a Waste Management Plan. The Waste Management Plan shall contain the following:

- a. Analysis of the proposed jobsite waste to be generated including types, quantities, and weights, and when during the job each type will be generated.
- b. Alternatives to Land-filling: A list of the waste materials from the project that will be separated for reuse, salvage, or recycling.
- c. Landfill Options: The name of the landfill(s) where trash will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all project waste in the landfill(s).
- d. Meetings: Contractor shall discuss construction waste management issues during meetings with the Contracting Officer. Meetings shall include subcontractors affected by the Waste Management Plan. At a minimum, waste management goals and issues shall be discussed at the following meetings:
  - (1)Pre-Bid Meeting
  - (2)Pre-construction Meeting
  - (3)Regular job-site meetings
- e. Material Handling Procedures: A description of the means by which any waste materials identified in Item 1.2.A.4 above will be protected from contamination and a description of the means to be employed in recycling the above materials consistent with requirements for acceptance by designated facilities.
- f. Transportation: A description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers or whether mixed materials will be collected by a waste hauler and removed from the site) and destination of materials. Provide an estimate of how often bins will need to be emptied.
- g. Suppliers: A description of the means by which materials and equipment will be delivered to the site. Provide an estimate of packaging materials generated and whether suppliers will eliminate or take back packaging.

F. WASTE MANAGEMENT PLAN IMPLEMENTATION:

1. Administration:

- a. Manager: The Contractor shall designate a full-time, on-site party responsible for instructing subcontractors, vendors, and workers, and for overseeing and documenting results of the Waste Management Plan for the project.
- b. Distribution: The Contractor shall distribute copies of the Waste Management Plan to the Project Manager, the Project Superintendent, each subcontractor, with four copies for the contracting Officer.
- c. Instruction: The Contractor shall provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse,

and return methods to be used by all parties at the appropriate stages of the project.

- d. Quantities: The Contractor shall provide on-site facilities for weighing all demolition waste, construction waste, refuse, and other materials not incorporated in the final project, and maintain records for the Contracting Officer of the disposition of each category of material by recycling, reuse, salvage, return, or landfill.
2. Separation Facilities: The Contractor shall lay out and label a specific area, approved by the Contracting Officer, to facilitate separation of materials for potential recycling, salvage, reuse, and return. Keeps recycling and waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.
3. Hazardous Wastes: Hazardous wastes shall be separated, stored, and disposed of according to the requirements of the Hazardous Waste Management and Disposal Plan and the requirements of Section 02081, Asbestos Abatement - Small Scale.
4. The Government inspector will examine all materials removed from the project not indicated for reuse and will tag or otherwise designate those materials that are serviceable or salvable.
5. Serviceable or salvageable items, except for locks latches, and cylinders, shall be turned in by the Contractor, by appointment, to the Defense Reutilization and Marketing Office (DRMO/SYT), Bldg 11559, 6-9431, or Base Supply by the Contractor. All locks, latches, and cylinders shall be turned in by the Contractor to the Base Lockshop, 30 CES/CEOHV, Bldg 11439, 6-5236. The Contractor shall schedule DRMO appointments in advance to allow efficient processing of turn-ins. Scrap metal shall be segregated into ferrous and nonferrous metals and shall be cut, dismantled, palletized, or prepared as required by the DRMO office for acceptance. Dismantling of equipment or material into separate components may be required. The Contractor shall protect materials from damage or theft during the interval between removal and disposal.
6. Any serviceable or salvageable items not accepted by DRMO or Base Supply will become the property of the Contractor and will be properly handled, transported, and disposed of off-base by the Contractor in conformance with the Waste Management Plan and with all applicable federal, state, and local regulations.
7. The Contractor shall dispose of any unusable items with no salvage value in accordance with the approved Waste Management Plan.
  - a. The Government inspector will inspect all loads of refuses and will issue a landfill access ticket. The purpose of the ticket will be to verify that the refuse was taken from a Vandenberg AFB project. The issuing of the ticket does not relieve the Contractor from the responsibility of properly hauling, handling, and disposing of all refuse.

- b. The Contractor shall weigh in at Building 11505 prior to transporting material to the landfill. Items being transported shall be segregated into dissimilar materials. All items determined to be unacceptable for disposal in the landfill, as determined by the Government inspector, shall become the property of the Contractor and disposed of off base at no additional cost to the Government.
  - c. Vehicles used in transporting refuse shall have a tarpaulin or covering to prevent spillage. The base sanitary landfill is subject to daily limits of disposal. Before disposal in base sanitary landfill, the Contractor shall certify there is no hazardous or designated waste.
8. Application for Progress Payments: The Contractor shall submit with each Application for Progress Payment a Summary of Waste Generated and Recycled by the project. Failure to submit this information shall render the Application for Payment incomplete and shall delay Progress Payment. The Summary shall contain the following information:
- a. The amount in tons of material land-filled from the project; the identity of the landfill; the total amount of tipping fees paid at the landfill; and the total disposal cost. Include manifests, weight tickets, receipt, and invoices.
  - b. For each material recycled, reused, or salvaged from the project, include the amount in tons, the date removed from the jobsite, the receiving party, the transportation cost, the amount of any money paid or received for the recycled or salvaged material, and the net total cost or savings of salvage or recycling each material. Attach manifests, weight tickets, receipts, and/or invoices.
- G. STORM WATER POLLUTION PLAN: The Contractor shall review the Storm Water Pollution Plan and file a Notice of Intent to comply with the terms of the General Permit for discharge of storm water on the base. Follow the procedures set forth in the Vandenberg Storm Water Pollution Prevention Plan for guidance, which is available from the Contracting Officer.
- H. USE OF RECYCLED AND RECOVERED MATERIALS:
- 1. In an effort to comply with the affirmative procurement requirements of Section 6002 of the Resource Conservation and Recovery Act, and with Executive Order 12873, Federal Acquisition, Recycling, and Waste Prevention, the Government strongly promotes the use of the recycled and recovered materials and products identified in the Environmental Protection Agency's Comprehensive Procurement Guidelines. These materials and products must meet the requirements of the specifications, must not delay the progress of the construction project, and must not be cost-prohibitive.
  - 2. The specified materials with recycled and recovered content are seen as the minimum, which should be considered when evaluating recycled/reused materials for this construction project. Other materials and product not listed, but commonly used in industry outside of the Government, should also be considered. Material and product submittals should, in addition to those items indicated in

the individual sections, list recycled or recovered materials and percentage content.

### 1.13 SUBMITTALS

- A. After notification of Contract award and prior to purchasing any materials, submit to the Contracting Officer for approval three copies of all items listed on AF Form 66, Schedule of Material Submittals (see Attachment 3), with one AF Form 3000, Material Approval Submittal, for each submittal. For the purpose of this statement, all entries included on a single AF Form 3000 are considered to be one submittal. Materials, shop drawings, manufacturer's recommendations, etc., shall not be incorporated into the resultant Contract work until approved by the Contracting Officer or his Authorized Representative.
- B. The following definitions set forth the minimum requirements for the type submittal listed on the AF Form 66 (Atch 3) and as further delineated under each section of the specifications:

#### 1. CERTIFICATION OF COMPLIANCE:

- a. Manufacturer's Certification. Submit manufacturer's certification that products meet or exceed specified requirements.
  - b. Testing Laboratory Services. Contract with an independent testing laboratory to perform inspections, tests, and other services, in accordance with specified standards. Notify the Contracting Officer 24 hours prior to commencement of testing services.
  - c. Letter of Compliance. Submit letter stating that materials meet drawings and specifications. Include applicable referenced standards.
2. SHOP DRAWINGS. Submit opaque reproductions.
3. SAMPLES. Submit one set of the full range of manufacturer's standard colors, textures, and patterns, unless otherwise indicated. Include the identification of each sample, giving full information. Samples may be retained until the completion of the Contract.
4. COLOR SELECTION. Provide field samples of finishes completed and finished. Acceptable samples in-place may be retained in completed work.
5. MANUFACTURER'S RECOMMENDATIONS. Submit manufacturer's printed instructions for delivery, storage, assembly, installation, adjusting, and finishing.
6. MANUFACTURER'S WARRANTY. Submit all manufacturer's warranties given to the Contractor for products used in the Contract.
7. CATALOG DATA. Mark each copy to identify applicable products, models, options, and other data; supplement manufacturer's standard data to provide information unique to the work.
8. OPERATIONS AND MAINTENANCE MATERIAL REQUIREMENTS:

- a. The Contractor shall identify all parts, materials, and consumable items required by the original equipment manufacturer to operate and maintain the system (as indicated in vendor data) in its installed operating environment for a 12-month period. These items shall be identified on a list by true manufacturer's part number, manufacturer's name, nomenclature, and all technical specifications or other identification required by the manufacturer to identify the individual items for reprourement. Include the name, address, and phone number of authorized suppliers of each item on the list.
  - b. Contractor shall provide a card, encased in plastic, that lists all routine maintenance requirements that will not violate the manufacturer's warranty during the above described 12-month period. The card shall also list the Contractor's name and telephone number, and the Civil Engineering POC for the project. These cards, once prepared, shall be securely tie-wrapped to each new piece of equipment installed as a part of the Contract.
9. SYSTEM OPERATING MANUALS AND EQUIPMENT OPERATING, MAINTENANCE, AND REPAIR MANUALS: The Contractor shall provide operating, maintenance, and repair manuals for all systems provided under this Contract as specified below. The preparation of the manuals shall be a continuing process from the Notice to Proceed to construction completion. The Contractor shall meet every 4 weeks throughout the life of the Contract with the Contracting Officer to demonstrate progress update on the preparation of the manuals.
- a. The manuals shall be submitted for approval within 90 days after approval of the submittal for the items proposed for procurement unless stated otherwise in the Technical Specifications. Four bound sets of manuals with original factor/vendor data (not reproduced copies of the data) plus six bound sets of manuals with reproduced copies of this data shall be provided. (A draft copy of the manuals shall be made available to the Government at least 30 days prior to approval). Each manual shall include the following:
    - (1)Hard Cover Binders. The manuals shall be bound in a 3-ring binder with a hard cover. The following identification shall be inscribed on the cover, the words "OPERATING MANUALS AND EQUIPMENT OPERATING, MAINTENANCE, AND REPAIR MANUALS", and the building name and number, location, and indication of utility or system covered. Manuals shall be approximately 8-1/2" x 11", with large sheets folded and capable of being easily pulled out for reference.
    - (2)Warning Page. A warning page shall be provided to warn of potential dangers (if they exist), such as high voltage, toxic chemicals, flammable liquids, explosive materials, carcinogens, or high pressures. The warning page shall be placed inside the front cover, in front of the title page.

- (3) Title Page. The title page shall show the name, address, and phone number of the Contractor, the Contract number, and the date of publication.
- (4) Table of Contents. Provide in accordance with standard commercial practice.
- b. General. Manuals shall include, in separate sections, the following information for each item of equipment and system:
  - (1) Performance sheets and graphs showing capacity data, efficiencies, electrical characteristics, pressure drops, and flow rates. Marked-up catalogs or catalog pages do not satisfy this requirement. Performance information shall be presented as concisely as possible and contain only data pertaining to equipment actually installed.
  - (2) Catalog cuts showing application information.
  - (3) Installation information showing minimum acceptable requirements.
  - (4) Operation and Maintenance Requirements. Include adequate illustrative material to identify and locate operating controls, indicating devices, and locations of areas or items requiring maintenance.
    - (a) Describe, in detail, starting and stopping procedures for components, adjustments required obtaining optimum equipment performance, and corrective actions for malfunctions.
    - (b) Maintenance instructions describing the nature and frequency of routine maintenance and procedures to be followed. Indicate any special tools, materials, and test equipment that may be required.
    - (c) For air conditioning systems, temperature control, and HVAC distribution systems, central heating plants, and district heating distribution systems, system information shall be provided on all operating conditions including normal operations, hazardous operations, and emergency exhausts.
  - (5) Repair information including diagrams and schematics, guidance for diagnosing problems, and detailed instructions for making repairs. Provide troubleshooting information that includes a statement of the indication or symptom of trouble and the sequential instructions necessary. Include test hookups to determine the cause, special tools and test equipment, and methods for returning the equipment to operating conditions. Information may be in chart form or in tabular format with appropriate headings.
  - (6) Parts list and names and addresses of the two closest parts supply agencies.
  - (7) Names and addresses of the local manufacturer's representatives and the parent company.



(8)A copy of all written materials used in the classroom and field training.

c. Operating and Maintenance (O&M) Equipment Data. Data to be provided for each equipment item: The O&M data to be submitted for each item of equipment shall include, but not be limited to, the items listed below. Separate sets of O&M data will not be required for identical pieces of equipment installed within a single major system.

(1)Equipment Description. Shall include item name, model number, part number, equipment price (FOB mfgr), electrical and/or mechanical characteristics, manufacturer's name and address, order number, and all other data found on the equipment data/nameplates.

(2)Component and Assemble Drawing/Master Parts List. Shall contain exploded views and/or master parts lists clearly identifying all parts and subassemblies by manufacturer's part number. Master parts lists shall also include price for each part (FOB mfgr).

(3)Control Diagrams and Sequences of Operations. Shall include operating instructions (including normal start up, normal shutdown, and emergency shutdown, as applicable).

(4)Performance Characteristics. Shall include performance curves for full range of operation.

(5)Installation Instructions. Shall include adjustment and alignment procedures, checkout procedures, and test procedures.

(6)Preventive Maintenance Procedures. Shall include inspection, cleaning, adjustment, service, and lubrication instructions. A schedule shall be furnished for each piece of equipment listing manufacturer's recommended maintenance routine of specific tasks to be performed at specific intervals such as daily, weekly, monthly, quarterly, or based on the number of operating hours. Preventive maintenance schedules shall take into account operating conditions at Vandenberg AFB, California.

(7)Corrective Maintenance Procedures. Shall include instructions for troubleshooting, repair, overhaul, and calibration.

(8)Special Items. List of special tools, special test equipment, hazards, and safety precautions shall be provided. Special item lists shall include price for each item (FOB mfgr). Whenever special tools and equipment are required to be provided, by the Technical Provisions or are normally provided by the manufacturer with the equipment, the Contractor shall annotate them on the lists. Items listed shall be turned over to the Contracting Officer.

(9)Recommended Spare Parts List. Shall contain the manufacturer's recommendation for 1-year spare parts stock level. These are

primary spares at the "line replaceable units" level to facilitate minimal system downtime by enabling rapid removal/replacement of failed components. True manufacturer's part number, manufacturer's name, nomenclature, all technical specifications, or other identification required by the manufacturer to uniquely identify an individual part for reprourement, price, lead time, and shelf time for each individual part shall be furnished.

- (10)Manufacturers. Shall include names, addresses, and telephone numbers of all manufacturers whose parts appear on the recommended spare parts list and shall be attached to the recommended spare parts list.
  - (11)Authorized Parts Suppliers. Shall include names, addresses, telephone and telex numbers of authorized parts suppliers of the equipment.
  - (12)Extended Warranties. Shall identify the availability and costs of extended warranties.
- d. System Operating Manuals. Four bound copies of manuals with original factory/vendor data, plus six bound copies of manuals with reproduced copies of this data shall be provided for each system. Manuals shall be written so that they can be understood by a graduate of both high school and service school with some practical experience. A separate manual shall be provided for each system as defined hereinafter. Generally, all manuals shall include the following information:
- (1)A general description of each system to show the type of system installed, its design or specified capacity and performance capabilities, special or unusual features, and relationship to other systems.
  - (2)A statement of the design intent to include design factors and assumptions.
  - (3)Operating instructions describing, in detail, system starting and stopping procedures, instrumentation, and adjustments necessary to obtain optimum system performance. The location of test connections and the values expected at these points shall be included, preferably in illustrated form. Data must include a list of the additional equipment required to accomplish the verification such as temperature, vacuum, pressure, hydraulic, or pneumatic gauges; voltmeters; ammeters; frequency meters; or signal generators. The listing must show methods of use or application, range of scales, and specific minimum tolerances or percentages of accuracy.
  - (4)Emergency operating instructions to include emergency procedures for equipment malfunctions to permit a short period of continued operation or to shut down equipment, if required, to prevent further damage. Included emergency shutdown instructions for fire, explosion, spills, or other contingencies. Provide guidance in emergency operations of systems controlled.

- (5) Single-line floor plans, to show location of equipment and configuration of systems. Floor plans shall be accomplished so that structural features are subdued compared to utility features. Floor plans shall be included in the manual, not as a separate package.
- e. Separate Equipment Operating, Maintenance, and Repair Manuals. Shall be provided for each system as defined hereinafter in this and other sections:
  - (1) Air-Conditioning Systems. Provide information on chillers, packaged air-conditioning equipment, towers, water treatment, chemical feed pumps and tanks, air-cooled condensers, pumps, compressors, air-handling units, and valves (associated with air-conditioning systems).
  - (2) Temperature Control and HVAC Distribution Systems. Provide the information described for the following equipment: valves, fans, air-handling units, pumps, boilers, converters and heat exchangers, chillers, water-cooled condensers, air-cooled condensers, cooling towers, fin-tube radiation, and radiant heating systems.
- f. Provide all information described for the following equipment: control air compressors, control components (sensors, controllers, adapters, and actuators), and water and air flow-measuring equipment.
  - (1) Exterior Electrical Systems. Information shall be provided on the following equipment: power transformers, relays, reclosers, breakers, regulators, converters, meters, and capacitor bank controls.
  - (2) Interior Electrical Systems. Information shall be provided on the following equipment: relays, motor control centers, switchgear, solid-state circuit breakers, motor controller, regulators, converters, filters, meters, and EPS lighting systems.
  - (3) Wiring diagrams and troubleshooting flow chart on control system.
  - (4) Special grounding systems.
- g. Direct Digital Control (DDC) System. The maintenance manual shall include descriptions of maintenance for all equipment including inspection, periodic preventive maintenance, fault diagnosis, and repair or replacement of defective components.
- h. Fire Protection Systems. Information shall be provided on the following equipment: alarm valves, manual valves, regulators, foam and gas storage tanks, piping materials, sprinkler heads, nozzles, pumps, and pump drivers.
- i. Fire Detection Systems. The maintenance manual shall include description of maintenance for all detectors, control panels,

batteries, transmitters, audible and visual alarm-signaling devices, and any other auxiliary detection or alarm equipment associated with fire detection and alarm systems. The manual shall include inspection, test, periodic maintenance, fault diagnosis, and repair or replacement of defective components.

- j. Payment for the system may be withheld until the operating and maintenance manuals are approved, and training has been successfully accomplished.

10. CONTRACTOR-PROVIDED TRAINING.

- a. The Contractor shall be responsible for the instruction and training of operating and maintenance personnel as specified below.
- b. The Contractor shall provide competent instructors for training of personnel designated by the Contracting Officer to operate systems and equipment, perform the required preventive maintenance to minimize breakdown and to perform necessary repairs when malfunction or breakdown of equipment occurs. Such training shall consist of on-the-equipment and/or classroom training for the periods specified, which shall be completed prior to project completion. The instructor(s) shall have no other duties during the period of training. Classroom instruction, where applicable, shall not exceed 50 percent of the total training time, with the balance devoted to on-the-equipment demonstration and familiarization. Emphasis will be given to both electrical and mechanical features, in accordance with approved training plans.
- c. The training shall be for not less than the periods of time specified, 5 days per week and 8 hours per day, subject to approval by the Contracting Officer. Each individual training session shall be presented one time only and shall be scheduled in a manner acceptable to the Contracting Officer. The operating and maintenance manual data shall be used as the base material for training. Training shall be limited to normal business hours, Monday through Friday, federal holidays excluded. For each individual training session, the Contractor shall provide to the Contracting Officer no later than 30 days after completion of the training session three reproducible copies of all reference materials/handouts provided by the Contractor to trainees at the training session. These training reference materials/handouts shall be labeled with title, subject(s), and date(s) of the training session(s) at which they were provided to trainees.

- C. Prior to the award of the Contract, submit from SECTION 07510 the Submittal 1, BURS Manufacturer Certification, and the Submittal 2, Appointment of Quality Controller. The Contracting Officer prior to the award of the Contract shall approve these submittals.

**1.13 GOVERNMENT-FURNISHED EQUIPMENT:** The following Government-Furnished Equipment (GFE) is available at the project site:

Two Gun racks for installation within the dining areas.  
Four screen television wall unit.  
Tables and chairs within the dining areas.

#### **1.14 RECORD DRAWINGS**

- A. Maintain a clean, undamaged set of Contract drawings and shop drawings. Mark the set to show the actual installation where it varies substantially from the work as originally drawn. Mark whichever drawing is most capable of showing conditions fully and accurately. Where shop drawings are used, record a cross-reference note or number at the corresponding location on the Contract drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
1. Mark record sets with red erasable pencil.
  2. Mark new information that is important to the Government, but was not shown on Contract drawings or shop drawings.
- B. Submit 7 days prior to final inspection, one set of marked-up Contract drawings and one set of marked-up shop drawings.
- C. Approved red-lined drawings will be returned to the Contractor, along with AutoCAD diskette (Release 14) of the original drawings. All work on the diskette will be accomplished by a Certified Engineering Technician and/or individuals with a minimum of five years drafting experience, at least three of which must be using AutoCAD. The name of these individuals shall be submitted in writing to the Contracting Officer. Modifications to the diskette shall be accomplished on the appropriate layer showing the work being changed. All revisions shall be done in the same format as the original drawing. On each sheet the words "AS-BUILT" in block letters will be added to the disks. The size of the letters will be at least 3/8 inches high and be placed either above the title block or to the left of the title block. Fill in the revisions block with "REVISED AS-BUILT," date and initials. The submittal shall include the revised AutoCAD diskette, the approved "Red Line" drawings and a full size plot of the drawings from the revised diskette. As-builts will be returned to the Contracting Representative within (2, 3, 4) weeks of receipt of the Master AutoCAD diskette.

#### PART 2 - PRODUCTS

Not Used

#### PART 3 - EXECUTION

Not Used

**END OF SECTION**

**SECTION 01001**

**CONTRACTOR PROJECT MANAGEMENT SYSTEM**

**PART 1 - GENERAL**

**1.01 INTRODUCTION**

- A. The Contractor Project Management System is included to assure adequate planning and execution of the work, to assist the Contracting Officer in appraising the reasonableness of the schedule, to evaluate progress of the work, to make progress payments, and to make decisions relative to time and/or cost adjustments which may result from changes in the work.
- B. The management system is to be based on a network analysis (Critical Path Method) managed by on-site personnel. On-site management shall be capable of using the system to address all project activities and resources on a real time interactive basis and be capable of rapidly evaluating alternative scenarios which will optimize project management. Evidence of technical expertise of on-site personnel with the proposed Network Analysis System shall be submitted for Contracting Officer's approval prior to any on-site work.
- C. The Contractor Project Management System is to be staffed and prepared pursuant to Contract clause: SCHEDULES FOR CONSTRUCTION CONTRACTOR, and Contract clause: SUPERINTENDENCE BY CONTRACTOR. In preparing this system the Contractor assumes responsibility for conformance with Contract requirements, planning, sequencing of work, and determining the construction means and methods.

**1.02 BASIC SYSTEM REQUIREMENTS**

- A. The Network Analysis System (NAS) must be capable of providing the following minimum on-site services: network analysis by I, J, or precedence notation; progress and cost reports; network comparisons; super- and sub-networks; resource reporting; report writer allowing flexible formatting and summarization; and graphical output. In preparing the NAS, the Contractor shall ensure that it represents an accurate and efficient plan for accomplishing the work.
- B. The Contractor's project management system must be capable of at least weekly update and production of physical update reports, percent complete reports, and cost reports for payment purposes. Management effort required will include capability to analyze factors delaying progress and altering logic and durations on an interactive up-to-date basis to maintain an active weekly management schedule.

**1.03 DETAILED SYSTEM REQUIREMENTS**

- A. The system shall consist of diagrams and accompanying mathematical analysis. Flexibility of formatting and summarization of reports will be provided by selecting and prioritizing from the following menu of information: identifying activity number (Precedence System) or numbers (I, J), duration in work days, activity description, code relating to party responsible to perform work, cost, manpower, estimate or labor hours, list of major items of construction equipment usage anticipated,

cost item or pay item activity is associated with, milestones, identification of subnet when applicable, early start date, late start date, early finish date, late finish date, anticipated start date, and a list of all activities that precede or follow each activity.

- B. Windowing (chronologically-selected portions of the network) specified for reports or diagrams must be possible. A network information report, listing the information contained in the reference menu and logic diagram, will be provided for the initially approved network as well as each update which incorporated a logic change.
- C. In addition to construction activities, the schedule shall include activities for submittal of materials, samples, shop drawings, operation and maintenance manuals, master equipment lists, spare parts lists, and other related documents. Also, included shall be activities for the procurement of all major materials and equipment, including fabrication and delivery, installation and testing. Of particular interest shall be those material and equipment procurement items that are expected to be critical to the progress of actual construction. Activities of the Government indicating reviews and approvals of materials, equipment, testing, and other actions that affect the progress shall be shown.
- D. The Contractor shall resource-load all relevant activities. As a minimum, resource loading shall identify equipment, management, skilled and unskilled labor requirements. The Contractor may, at his option, decide on greater detail for his own purposes, but if this option is elected, the system must be able to consolidate resources into the above defined categories for use by the Contracting Officer.
- E. The Contractor shall incorporate any and all milestone- and Contract-required events which may be specified elsewhere within these specifications. Should milestone events be not specifically identified by the Government within these specifications, the Contractor shall identify at least 5 percent of the network activities and designate them as milestone activities.
- F. Logic Diagrams:
  - 1. Logic diagrams shall show the order and interdependence of activities and the sequence in which the work is to be accomplished as planned by the Contractor.
  - 2. Detailed networks need not be time-scaled, but drafted to have a continuous flow from left to right, showing how the start of a given activities and how its completion of preceding activities and how its completion restricts the start of the following activities.
  - 3. A logic diagram of the complete project shall be submitted with the initial NAS, showing each activity-identifying numbers, duration, description, with the critical path easily identified. Update diagrams will be provided as required by logic changed, but not more frequently than the monthly update.
- G. In addition to the detailed schedule, a summary schedule shall be developed by the Contractor. The summary schedule shall consist of a minimum of 30 activities and be updated monthly.

#### 1.04 SUBMISSION AND APPROVAL

A. Submission and approval of the system shall be as follows:

1. The Contractor shall submit for review and approval a description of the type and capabilities of the submittal network system proposed to be used. Submission shall be within 30 calendar days after the Award of Contract.
2. The complete network system consisting of the detailed network mathematical analysis (including on-site manpower loading schedule and equipment schedule) and network diagrams shall be submitted for approval within 10 calendar days after receipt of Notice to Proceed.
3. The Contractor shall participate in a review and evaluation of the proposed network diagrams and mathematical analyses by the Contracting Officer. Any revisions necessary as a result of this review shall be resubmitted for approval of the Contracting Officer within 3 calendar days after the conference. The approved schedule shall be used by the Contractor for planning, organizing and directing the work, reporting progress, and requesting payment for work accomplished.

#### 1.05 NETWORK MODIFICATIONS

- A. In those cases where the Contract performance is delayed due to causes beyond the control of the Contractor, a time extension may be allowable under one or more of the Contract clauses entitled CHANGES, DIFFERING SITE CONDITIONS, DEFAULT (Fixed-Price Construction), SUSPENSION OF WORK, or other applicable clauses, as a condition precedent to granting a time extension, the Contractor shall submit a time proposal in such format as to identify the specific subnet diagram and activities affected.
- B. Change order proposals shall include description or listing of all proposed changes to the network, by activity, and demonstrate the affect on the Contract required completion date. A complete list of activities changed and a subnet of activities affected by the change shall be submitted.
- C. "Float" or "slack" is defined as the amount of time between the early start date and the late start date, or the early finish date and the late finish date, of any of the activities in the NAS schedule. Float or slack is not time for the exclusive use or benefit of either the Government or the Contractor. Extensions of time for performance may be granted to the extent that equitable time adjustment for the activities affected exceed the total float or, where otherwise justified, affect on the Contract completion can be shown. The Contract completion date is fixed, and will be amended only by modifications which include time and are signed by the Contracting Officer.
- D. Rapid resolution of change orders and the granting of other time extensions, where authorized by the Contracting Officer, is a critical part of the overall management system. Implementation of all justified activity and logic changes shall be made and reflected in the next update after approval of the Contracting Officer.



- E. If, in the opinion of the Contracting Officer, the current schedule no longer accurately reflects the Contractor's real plan for accomplishing the work or no longer reflects a viable way of finishing the work on schedule, the Contractor shall be directed to revise the schedule and submit it for approval within 7 calendar days of direction.

#### 1.06 REPORTS

- A. After the network approval, the Contractor shall review and evaluate the actual progress with the Contracting Officer's Representative on a periodic basis and submit any updated weekly reports 3 workdays after the meeting.
- B. Monthly update reports will be submitted at mid-month showing current status and actual start and finish dates of project activities, and will be capable of comparing the current status with the approved base schedule. Each monthly update report shall be stored on the Contractor's computer until the final pay estimate is processed. The content of the monthly update shall be flexible to show items listed in the menu. The mid-month report shall be used for partial payments.
- C. A meeting may be held 3 workdays before the delivery of the mid-month report to discuss all input data. If the Contractor desires to make changes in his method of operation and scheduling, he shall clearly present the proposed changes.
- D. A narrative report shall be submitted with the mid-month report indicating current and anticipated problems, delaying factors, and conditions that are impacting the Contractor's work effort. An analysis showing the reasons for the delay/gain and their impact upon the current schedule shall be included. When it is apparent that scheduled milestones and completion dates will not be met, the Contractor shall propose specific methods he intends to implement to bring the project back on schedule at no cost to the Government. Such measures may include, but are not limited to:
  - 1. Increasing construction manpower in such quantities and crafts as will substantially eliminate the backlog of work effort.
  - 2. Increasing the number of working hours per shift, shifts per workday, workdays per week, the amount of construction equipment, or any combination thereof.
  - 3. Rescheduling of activities to achieve maximum practical concurrency of work efforts.
- E. The Contractor shall implement such procedures as may be necessary for the active participation by his subcontractors in preparing and updating the schedule. Subcontractor shall be provided with schedules which identify the interfaces of their work with the work of others. As a minimum, the Contractor shall provide bar graphs to each major subcontractor showing activity times with plots on an early start basis. Copies of these schedules shall also be available to the Contracting Officer. The relationship between subcontractor and interdependency of work shall be managed by the Contractor. When these interdependencies are violated or impaired, the Contractor shall identify the problem,

resolve it, and provide the information to the Contracting Officer as part of the monthly report.

1.07 PAYMENT REQUESTS

- A. The monthly update report shall be used as a basis for the monthly partial pay estimate. The report will state actual percent complete, and current value of partially or completed work.
- B. The first payment shall not be made until the preliminary schedule has been approved by the Contracting Officer and the second payment shall not be made until the full schedule has been approved by the Contracting Officer. If, in the judgment of the Contracting Officer, the Contractor fails or refuses to provide an approved schedule and other progress data specified, the Contractor shall be deemed not to have provided the required information upon which payments may be made.
- C. Activities submitted for payment on AF Form 3065 (Contract Progress Report) shall be based on the approved schedule network activities summarized on AF Form 3064 (Contract Progress Schedule). No payment shall be made for activities conducted in deviation of the approved logic.
- D. Payment for activities conducted when previously dependent activities have not been completed or accepted due to quality defects, shall be restricted at the discretion of the Contracting Officer.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

**END OF SECTION**

SCHEDULE OF MATERIAL SUBMITTAL															REPAIR/ADD TO DINING HALL		BUILDING 13330- VAFB		SOLICITATION/CONTRACT NUMBER XUMU-96-1215 B/C			
TO BE COMPLETED BY PROJECT ENGINEER																						
LINE NUMBER	ITEM/DESCRIPTION OF ITEM/CONTRACT REFERENCE/TYPE OF SUBMITTAL	CERTIFICATION OF COMPLIANCE	SHOP DWS.	SAMPLES	NUMBER OF COPIES REQUIRED								REQUIRED SUBMISSION * DATE	DATE RECEIVED IN CONTRACTING	DATE TO CIVIL ENGINEERING	RETURN SUSPENSE DATE	SUBMITTAL NUMBERS	DATE CONTRACTOR NOTIFIED		CONTRACTOR RESUBMITTAL	SUBMITTAL NUMBERS	REMARKS
					COLOR SELECTION	MANUFACTURERS RECOMMENDATIONS	MANUFACTURERS WARRANTY	CATALOG DATA	OPERATING INSTRUCTIONS	O&M MANUALS	CALCULATIONS	APPROVED						DISAPPROVED				
1	DEMOLITION PROCEDURES	3	3	—	—	—	—	—	—	—	—	—	31-May									
2	SOILS COMPACTION TESTS	3	—	—	—	—	—	—	—	—	—	—	31-May									
3	ASPHALT CONCRETE PAVING	3	—	—	—	—	—	—	—	—	—	—	15-Jun									
4	SITE DRAINAGE MATERIALS	—	—	—	—	—	—	3	—	—	—	—	15-Jun									
5	REINFORCEMENT	3	—	—	—	—	—	—	—	—	—	—	31-May									
6	CONCRETE TESTING	3	—	—	—	—	—	—	—	—	—	—	30-Jul									
7	CONCRETE SEALER	—	—	—	—	3	—	3	—	—	—	—	31-May									
8	CMU BLOCK & GROUT	3	—	—	—	—	—	—	—	—	—	—	31-May									
9	STRUCTURAL STEEL	—	3	—	—	3	—	3	—	—	—	—	31-May									
10	STEEL DECK	—	3	—	—	—	—	3	—	—	—	—	31-May									
11	MISCELLANEOUS METALS	—	3	—	—	—	—	—	—	—	—	—	31-May									
12	STEEL PIPE RAIL	—	3	3	—	—	—	—	—	—	—	—	15-Jun									
13	EXPANSION JOINTS	—	—	3	—	3	—	3	—	—	—	—	30-Jun									



SCHEDULE OF MATERIAL SUBMITTAL													REPAIR/ADD TO DINING HALL										BUILDING 13330- VAFB				SOLICITATION/CONTRACT NUMBER XUMU-96-1215 B/C			
TO BE COMPLETED BY PROJECT ENGINEER																														
LINE NUMBER	ITEM/DESCRIPTION OF ITEM/CONTRACT REFERENCE/TYPE OF SUBMITTAL	NUMBER OF COPIES REQUIRED										REQUIRED SUBMISSION * DATE	DATE RECEIVED IN CONTRACTING	DATE TO CIVIL ENGINEERING	RETURN SUSPENSE DATE	SUBMITTAL NUMBERS	DATE CONTRACTOR NOTIFIED		CONTRACTOR RESUBMITTAL	SUBMITTAL NUMBERS	REMARKS									
		CERTIFICATION OF COMPLIANCE	SHOP DWS.	SAMPLES	COLOR SELECTION	MANUFACTURERS RECOMMENDATIONS	MANUFACTURERS WARRANTY	CATALOG DATA	OPERATING INSTRUCTIONS	OSM MANUALS	CALCULATIONS						APPROVED	DISAPPROVED												
26	GLAZING	—	—	3	—	—	—	3	—	—	—	30-Jul																		
27	METAL STUDS	—	—	—	—	3	—	3	—	—	—	30-Jul																		
28	IRRIGATION MATERIALS	—	3	—	—	3	3	—	—	—	—	31-May																		
29	PLASTER	3	—	2	—	3	—	3	—	—	—	30-Jul																		
30	GYPSUM BOARD TEXTURE	—	—	2	—	—	—	—	—	—	—	15-Sep																		
31	TILE	—	—	3	3	—	—	—	—	—	—	30-Aug																		
32	ACOUSTICAL SUSPENDED CLGS.	—	3	3	—	3	—	3	—	—	—	30-Aug																		
33	RESILIENT FLOORING	—	—	3	—	2	—	—	—	3	—	30-Aug																		
34	CARPET	—	3	3	3	—	—	3	—	3	—	30-Aug																		
35	PAINT DATA	—	—	—	—	—	—	3	—	—	—	31-May																		
36	PAINT COLORS	—	—	2	—	3	—	—	—	—	—	30-Aug																		
37	WALL COVERING	—	—	3	3	—	—	—	—	—	—	30-Aug																		

SCHEDULE OF MATERIAL SUBMITTAL														BUILDING 13330- VAFB										SOLICITATION/CONTRACT NUMBER XUMU-96-1215 B/C			
REPAIR/ADD TO DINING HALL																											
TO BE COMPLETED BY PROJECT ENGINEER																											
LINE NUMBER	ITEM/DESCRIPTION OF ITEM/CONTRACT REFERENCE/TYPE OF SUBMITTAL	NUMBER OF COPIES REQUIRED										REQUIRED SUBMISSION DATE	DATE RECEIVED IN CONTRACTING	DATE TO CIVIL ENGINEERING	RETURN SUSPENSE DATE	SUBMITTAL NUMBERS	DATE CONTRACTOR NOTIFIED		CONTRACTOR RESUBMITTAL	SUBMITTAL NUMBERS	REMARKS						
		CERTIFICATION OF COMPLIANCE	SHOP DWGS.	SAMPLES	COLOR SELECTION	MANUFACTURERS RECOMMENDATIONS	MANUFACTURERS WARRANTY	CATALOG DATA	OPERATING INSTRUCTIONS	O&M MANUALS	CALCULATIONS						APPROVED	DISAPPROVED									
38	PRE-FINISHED WALL PANELS	—	—	3	3	—	3	—	—	3	—	30-Aug															
39	TV BRACKETS	—	—	—	—	3	—	3	—	—	—	30-Jul															
40	TOILET PARTITIONS	—	3	2	2	3	—	3	—	3	—	30-Jul															
41	WALL/CORNER GUARDS	3	—	2	2	3	—	3	—	—	—	30-Jul															
42	SIGNAGE	—	3	3	—	—	—	3	—	—	—	30-Aug															
43	TOILET ACCESSORIES	—	—	—	—	3	—	3	—	—	—	30-May															
44	MISCELLANEOUS ITEMS	3	—	—	—	2	—	3	—	—	—	30-Jul															
45	CABINETS	—	3	—	3	—	—	3	—	—	—	30-May															
46	WINDOW BLINDS	—	3	2	2	3	—	3	3	—	—	30-Jul															
47	DINING BOOTHS	—	3	2	2	2	—	3	—	3	—	30-May															
48	SOLARIUM	—	3	—	—	—	—	3	—	—	3	30-May															
49	SOLARIUM SHADES	—	—	3	3	—	—	—	—	3	—	30-Jul															

[illegible]

AF FORM 66, OCT 89

\* SUBMISSION DATES BASED ON 4-15 AWARD

**SECTION 01440**

**CONTRACTOR QUALITY CONTROL**

PART I - GENERAL

**1.01 REFERENCES**

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.
1. ASTM D 3740 - (1988) Evaluation of Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
  2. ASTM E 329 - (1990) Use in the Evaluation of Testing and Inspection Agencies as Used in Construction.

- 1.02 PAYMENT:** Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

- 3.01 GENERAL:** The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract clause entitled Inspection of Construction. The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the Contract requirements. The system shall cover all construction operations, both on-site and off-site, and shall be keyed to the proposed construction sequence.

**3.02 QUALITY CONTROL PLAN**

- A. **GENERAL:** The Contractor shall furnish for review by the Contracting Officer, not later than 10 days after receipt of Notice to Proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause entitled Inspection of Construction. The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Contracting Officer will consider an interim plan for the first 10 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin



until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

B. CONTENT OF THE CQC PLAN: The CQC plan shall include, as a minimum, the following to cover all construction operations, both on-site and off-site, including work by subcontractors, fabricators, suppliers, and purchasing agents:

1. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three-phase control system for all aspects of the work specified. The staff shall include a CQC system manager who shall report to the project manager or someone higher in the Contractor's organization. Project manager in this context shall mean the individual with responsibility for the overall management of the project including quality and production.
2. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a QC function.
3. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager including authority to stop work which is not in compliance with the Contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters will also be furnished to the Contracting Officer.
4. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, off-site fabricators, suppliers, and purchasing agents.
5. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer).
6. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
7. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures will establish verification that identified deficiencies have been corrected.
8. Reporting procedures, including proposed reporting formats.
9. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks and has separate control requirements. It could be identified by different trades or disciplines, or it could be work by the same trade in a different environment. Although each section of the

specifications may generally be considered as a definable feature of work, there are frequently more than one definable feature under a particular section. This list will be agreed upon during the coordination meeting.

- C. **ACCEPTANCE OF PLAN:** Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC plan and operations including removal of personnel, as necessary, to obtain the quality specified.
- D. **NOTIFICATION OF CHANGES:** After acceptance of the QC plan, the Contractor shall notify the Contracting Officer in writing a minimum of 7 calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

**3.03 COORDINATION MEETING:** After the Pre-construction Conference, before start of construction, and prior to acceptance by the Contracting Officer of the Quality Control Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both on-site and off-site work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the Contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

#### **3.04 QUALITY CONTROL ORGANIZATION**

- A. **CQC SYSTEM MANAGER:** The Contractor shall identify an individual within his organization at the site of the work who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. This CQC System Manager shall be on the site at all times during construction and will be employed by the Contractor, except as noted in the following. An alternate for the CQC System Manager will be identified in the plan to serve in the event of the system manager's absence. Period of absence may not exceed 2 weeks at any one time, and not more than 15 workdays during a calendar year. The requirements for the alternate will be the same as for the designated CQC manager.
- B. **CQC ORGANIZATIONAL STAFFING:** The Contractor shall provide a CQC staff which shall be at the site of work at all times during progress, with complete authority to take any action necessary to ensure compliance with the Contract.
  - 1. **CQC Staff:** Following are the minimum requirements for the CQC staff. These minimum requirements will not necessarily assure an adequate staff to meet the CQC requirements at all times during construction. The actual strength of the CQC staff may vary during any specific

- work period to cover the needs of the work period. When necessary for a proper CQC organization, the Contractor will add additional staff at no cost to the Government. This listing of minimum staff in no way relieves the Contractor of meeting the basic requirements of quality construction in accordance with Contract requirements. All CQC staff members shall be subject to acceptance by the Contracting Officer.
2. CQC System Manager: The CQC system manager shall be a graduate engineer, graduate architect, or a graduate of construction management, with a minimum of 5 years construction experience on similar type construction to this Contract or an experienced construction person with a minimum of 10 years experience in related work. The CQC system manager shall be assigned as system manager, but may have duties as project superintendent in addition to quality control.
  3. Supplemental Personnel: A staff shall be maintained under the direction of the CQC system manager to perform all QC activities. The staff must be of sufficient size to ensure adequate QC coverage of all work phases, work shifts, and work crews involved in the construction. These personnel may perform other duties, but must be fully qualified by experience and technical training to perform their assigned QC responsibilities and must be allowed sufficient time to carry out these responsibilities. The QC plan will clearly state the duties and responsibilities of each staff member.
- C. ORGANIZATIONAL CHANGES: The Contractor shall obtain Contracting Officer's acceptance before replacing any member of the CQC staff. Requests shall include the names, qualifications, duties, and responsibilities of each proposed replacement.
- 3.05 SUBMITTALS:** The CQC organization shall be responsible for certifying that all submittals are in compliance with the Contract requirements.
- 3.06 CONTROL**
- A. Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the Contract. The controls shall be adequate to cover all construction operations, including both on-site and off-site fabrication, and will be keyed to the proposed construction sequence. The controls shall include at least three phases of control to be conducted by the CQC system manager for all definable features of work, as follows:
    1. Preparatory Phase: This phase shall be performed prior to beginning work on each definable feature of work and shall include:
      - a. A review of each paragraph of applicable specifications.
      - b. A review of the contract plans.
      - c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.

- d. A check to assure that provisions have been made to provide required control inspection and testing.
  - e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the Contract.
  - f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawing or submitted data, and are properly stored.
  - g. A review of the appropriate activity hazard analysis to assure safety requirements are met.
  - h. Discussion of procedures for constructing the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that phase of work.
  - i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
  - j. The Contracting Officer shall be notified at least 48 hours in advance of beginning any of the required action of the preparatory phase. This phase shall include a meeting conducted by the CQC system manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC system manager and attached to the daily QC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet Contract specifications.
2. Initial Phase: This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:
- a. A check of preliminary work to ensure that it is in compliance with contract requirements. Review minutes of the preparatory meeting.
  - b. Verification of full contract compliance. Verify required control inspection and testing.
  - c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with sample panels if appropriate.
  - d. Resolve all differences.
  - e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
  - f. The Contracting Officer shall be notified at least 48 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC system manager and attached to the daily QC report. Exact location of initial phase shall be

indicated for future reference and comparison with follow-up phases.

- g. The initial phase should be repeated for each new crew to work on-site, or any time acceptable specified quality standards are not being met.
3. Follow-Up Phase: Daily checks shall be performed to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon or conceal nonconforming work.
4. Additional Preparatory and Initial Phases: Additional preparatory and initial phases may be conducted on the same definable features of work as determined by the Government if the quality of on-going work is unacceptable; or if there are changes in the applicable QC staff or in the on-site production supervision or work crew; or if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

### 3.07 TESTS

- A. TESTING PROCEDURE: The Contractor shall perform tests specified or required to verify that control measures are adequate to provide a product which conforms to Contract requirements. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. A list of tests to be performed shall be furnished as a part of the QCQ plan. The list shall give the test name, frequency, specification paragraph containing the test requirements, the personnel and laboratory responsible for each type of test, and an estimate of the number of tests required. The Contractor shall perform the following activities and record and provide the following data:
  1. Verify that testing procedures comply with contract requirements.
  2. Verify that facilities and testing equipment area available and comply with testing standards.
  3. Check test instrument calibration data against certified standards.
  4. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
  5. Results of all tests taken, both passing and failing tests, will be recorded on the Quality Control report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test will be given. Actual test reports may be submitted later, if approved by the Contracting Officer, with a reference to the test number and date taken. An information copy of test performed by an off-site or

commercial test facility will be provided directly to the Contracting Officer. Failure to submit timely test reports, as stated, may result in nonpayment for related work performed and disapproval of the test facility for this Contract.

**B. TESTING LABORATORIES:**

1. **Capability Check:** The Contracting Officer reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the Contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.
2. **Capability Recheck:** If the selected laboratory fails the capability check, the Contractor will be assessed a charge to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the Contract amount due to the Contractor.

- C. ON-SITE LABORATORY:** The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

- 3.08 COMPLETION INSPECTION:** At the completion of all work or any increment thereof established by a completion time stated in the Special Clause entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the CQC system manager shall conduct an inspection of the work and develop a "punch-list" of items which do not conform to the approved plans and specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph DOCUMENTATION below, and shall include the estimated date by which the deficiencies will be corrected. The CQC system manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected and so notify the Contracting Officer. These inspections and any deficiency corrections required by this paragraph will be accomplished within the time stated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

**3.09 DOCUMENTATION**

A. The Contractor shall maintain current records of quality control operations, activities, and tests performed, including the work of subcontractors and suppliers. These records shall be on an acceptable form and shall include factual evidence that required quality control activities and/or tests have been performed, including but not limited to the following:

1. Contractor/subcontractor and their area of responsibility.
2. Operating plant/equipment with hours worked, idle, or down for repair.

3. Work performed today, giving location, description, and by whom. When Network Analysis System (NAS) is used, identify each phase of work performed each day by NAS activity number.
4. Test and/or control activities performed with results and references to specifications/plan requirements. The control phase should be identified (Preparatory, Initial, Follow-Up). List deficiencies noted along with corrective action.
5. Material received with statement as to its acceptability and storage.
6. Identify submittals reviewed, with Contract reference, by whom, and action taken.
7. Off-site surveillance activities, including actions taken.
8. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
9. List instructions given/received and conflicts in plans and/or specifications.
10. Contractor's verification statement.
11. These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the Contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date(s) covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no-work period. All calendar days shall be accounted for throughout the life of the Contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC system manager. The report from the CQC system manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

**3.10 NOTIFICATION OF NONCOMPLIANCE:** The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor at the site of the work, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

**END OF SECTION**